

IN THE DRAWINGS

The attached sheets of drawings include changes to FIGS. 4, 5, 6a, 6b, 7 and 8. These sheets replace the original sheets including FIGS. 4, 5, 6a, 6b, 7 and 8. Those errors pointed out by the Examiner have been corrected.

REMARKS

The present application was filed on October 17, 2000 with claims 1-29. Claims 1-29 remain pending. Claims 1, 2, 4, 6, 7, 11, 12, 15, 18 and 27 have been amended and claims 1, 9, 10, 12, 20 and 21 are the pending independent claims.

In the outstanding Office Action dated November 24, 2004, the Examiner: (i) objected to the specification; (ii) objected to the drawings; (iii) rejected claims 4-8, 11 and 15-19 under 35 U.S.C. §112, second paragraph; (iv) rejected claims 1, 4, 6-10, 12, 15, 17-21, and 24-29 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,825,877 to Dan et al. (hereinafter "Dan"); (v) rejected claims 2, 3, 5, 13, 14, 16 and 23 under 35 U.S.C. §103(a) as being unpatentable over Dan in view of U.S. Patent No. 5,052,040 to Preston et al. (hereinafter "Preston"); and (vi) rejected claims 11 and 22 under 35 U.S.C. §103(a) as being unpatentable over Dan in view of U.S. Patent No. 6,272,593 to Dujari (hereinafter "Dujari").

With regard to the objection to the specification. The specification has been amended in accordance with the Examiner's suggestions. Accordingly, withdrawal of the objection to specification is therefore respectfully requested.

With regard to the objection to the drawings. The specification and the drawings have been amended in accordance with the Examiner's suggestions. Accordingly, withdrawal of the objection to drawings is therefore respectfully requested.

With regard to the rejection of claims 4-8, 11 and 15-19 under 35 U.S.C. §112, second paragraph, claims 4, 6, 7, 11, 15 and 18 have been amended in accordance with the Examiner's suggestions. Accordingly, withdrawal of the rejection to claims 4-8, 11 and 15-19 under 35 U.S.C. §112, second paragraph is therefore respectfully requested.

With regard to the rejection of claims 1, 4, 6-10, 12, 15, 17-21 and 24-29 under 35 U.S.C. §102(b) as being anticipated by Dan, Applicants assert that Dan fails to teach or suggest each and every element respectively recited in the aforementioned claims.

It is well-established law that "[a] claim is anticipated only if each and every element as set forth in the claims is found, either expressly or inherently described, in a single prior art reference." See, e.g., Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631, 2 U.S.P.Q.2d 1051,

1053 (Fed. Cir. 1987). See also, M.P.E.P. §2131. Applicants assert that Dan fails to teach or suggest each and every element respectively recited in claims 1, 4, 6-10, 12, 15, 17-21 and 24-29 and, thus, the §102(b) rejection based on Dan clearly fails to meet the above legal requirements for anticipation. Support for this assertion follows.

Independent claim 1 recites an apparatus for secure management of data in a computer controlled storage system having a trusted data management server, responsive to a user or user program application, capable of storing data in and retrieving data from a storage system. The storage system in communication with the tdm server comprises a security structure generator means that generates security management structures. Specifically, the security structure generator means generates a unique identifier for the data; access control information for the data; a data signature for authenticating the data from the data and the unique identifier; and an access control information signature for authenticating the access control information from the access control information and the unique identifier.

Dan discloses the delivery of software through distribution systems, and more specifically, a code production system that communicates with a certification agency that issues a certificate for the code and a certificate for the access list of that code. The code and its ACL, along with their certificates are stored on a server. A client downloading the code or access list can verify the integrity of the code/access list and the system can enforce the access list such that the permissions and resources are not exceeded.

Thus, Dan fails to disclose a tdm server that is responsive to a user for storing data in and retrieving data from a storage system. The server of Dan only downloads software code to a client, and does not store data in and retrieve data from a storage system, as recited in claim 1. Further, Dan does not disclose a tdm server that communicates with a storage system having a security structure generator means that generates security management structures. Instead, the server in Dan only communicates with the a code production system, which does not include a security structure generator. The certification agency of Dan is described as a trusted third party.

Independent claim 9 recites a system for secure management of data in a computer controlled storage system having a tdm server accessible to a user or user program application, a storage means

managed by a storage server, and a communication system for connecting the tdm server and the storage server for the transfer of information therebetween. The tdm server is adapted to manage protected data in the storage means with unique identifiers, data signatures, access control information, and access control information signatures. The storage server is adapted to store protected data, signatures of the data, unique identifiers, access information, access information signatures to permit access of the protected data under management of the tdm server.

Dan fails to disclose a tdm server in communication with a storage means managed by a storage server. Further, Dan fails to disclose two separate servers, one adapted to manage and the other adapted to store protected data, data signatures, unique identifiers, access information and access information signatures, as recited in claim 9.

Independent claims 10, 12, 20 and 21 recite similar limitations to those of claims 1 and 9 and differ from Dan in a similar manner to those described above with regard to claims 1 and 9. Dependent claims 4, 6, 7, 8, 15, 17-19 and 24-29 are patentable at least by virtue of their respective dependency from independent claims 1, 9, 10, 12, 20 and 21, and also recite patentable subject matter in their own right. Accordingly, withdrawal of the rejection to claims 1, 4, 6-10, 12, 15, 17-21 and 24-29 under 35 U.S.C. §102(b) is therefore respectfully requested.

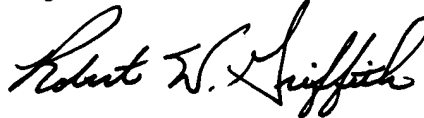
With regard to the rejection of claims 2, 3, 5, 13, 14, 16 and 23 under 35 U.S.C. §103(a) as being unpatentable over Dan in view of Preston, Applicants assert that the combination fails to teach, suggest or render obvious the elements of claims 2, 3, 5, 13, 14, 16 and 23. Dependent claims 2, 3, 5, 13, 14, 16 and 23 are patentable at least by virtue of their respective dependency from independent claims 1 and 12, and also recite patentable subject matter in their own right. Accordingly, withdrawal of the rejection to claims 2, 3, 5, 13, 14, 16 and 23 under 35 U.S.C. §103(a) is therefore respectfully requested.

With regard to the rejection of claims 11 and 22 under 35 U.S.C. §103(a) as being unpatentable over Dan in view of Dujari, Applicants assert that the combination fails to teach, suggest or render obvious the elements of claims 11 and 22. Dependent claims 11 and 22 are patentable at least by virtue of their respective dependency from independent claims 10 and 21, and

also recite patentable subject matter in their own right. Accordingly, withdrawal of the rejection to claims 11 and 22 under 35 U.S.C. §103(a) is therefore respectfully requested.

In view of the above, Applicants believe that claims 1-29 are in condition for allowance, and respectfully request withdrawal of the §112, §102(b) and §103(a) rejections.

Respectfully submitted,



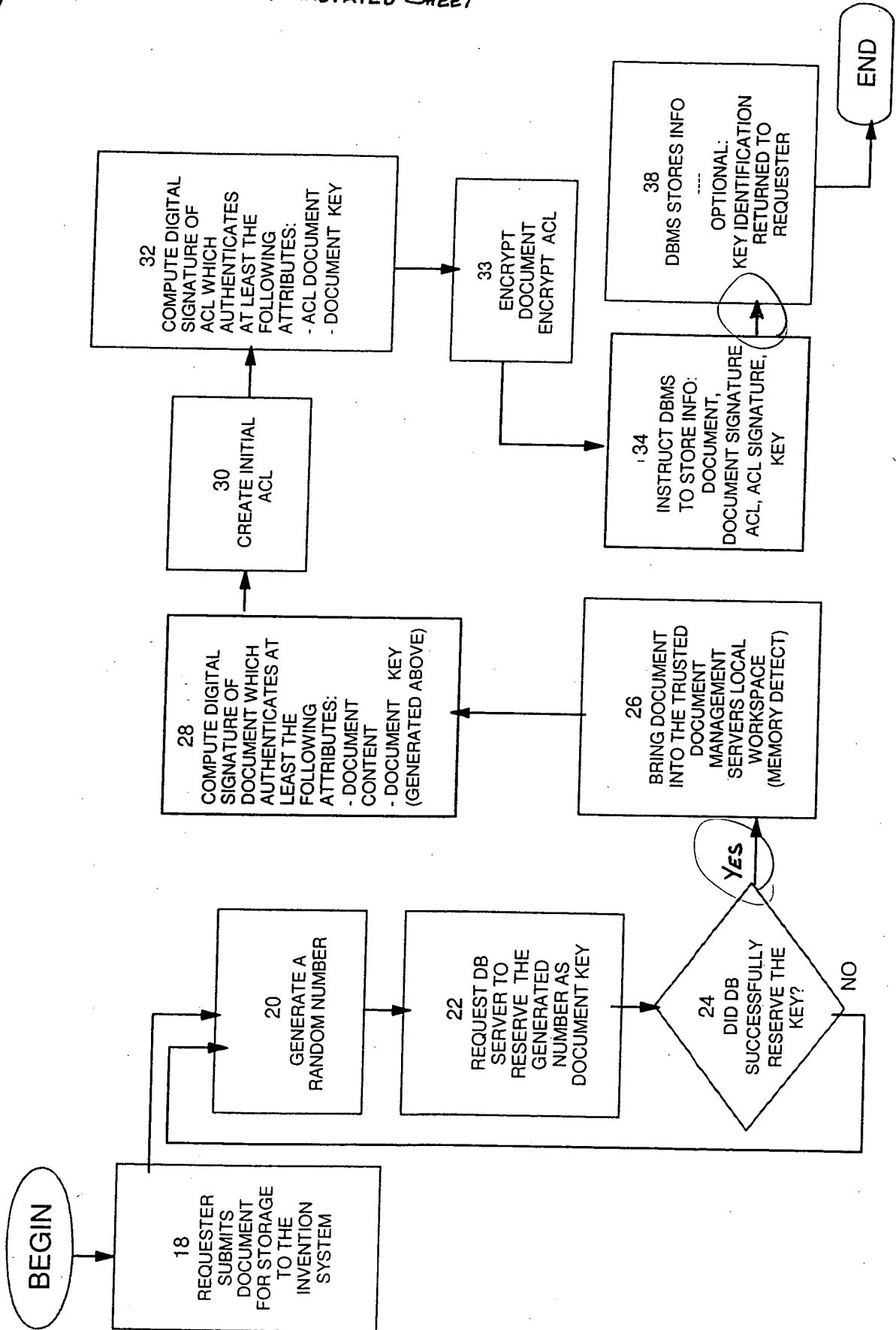
Date: February 24, 2005

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Enclosures: Replacement Sheets for FIGS. 4, 5, 6a, 6b, 7 and 8
Annotated Sheets showing changes made to FIGS. 4, 5, 6a, 6b, 7 and 8



FIG. 4
PROTECTED DOCUMENT CREATION AND STORAGE FLOWCHART



DOCUMENT UPDATE FLOWCHART

FIG. 5

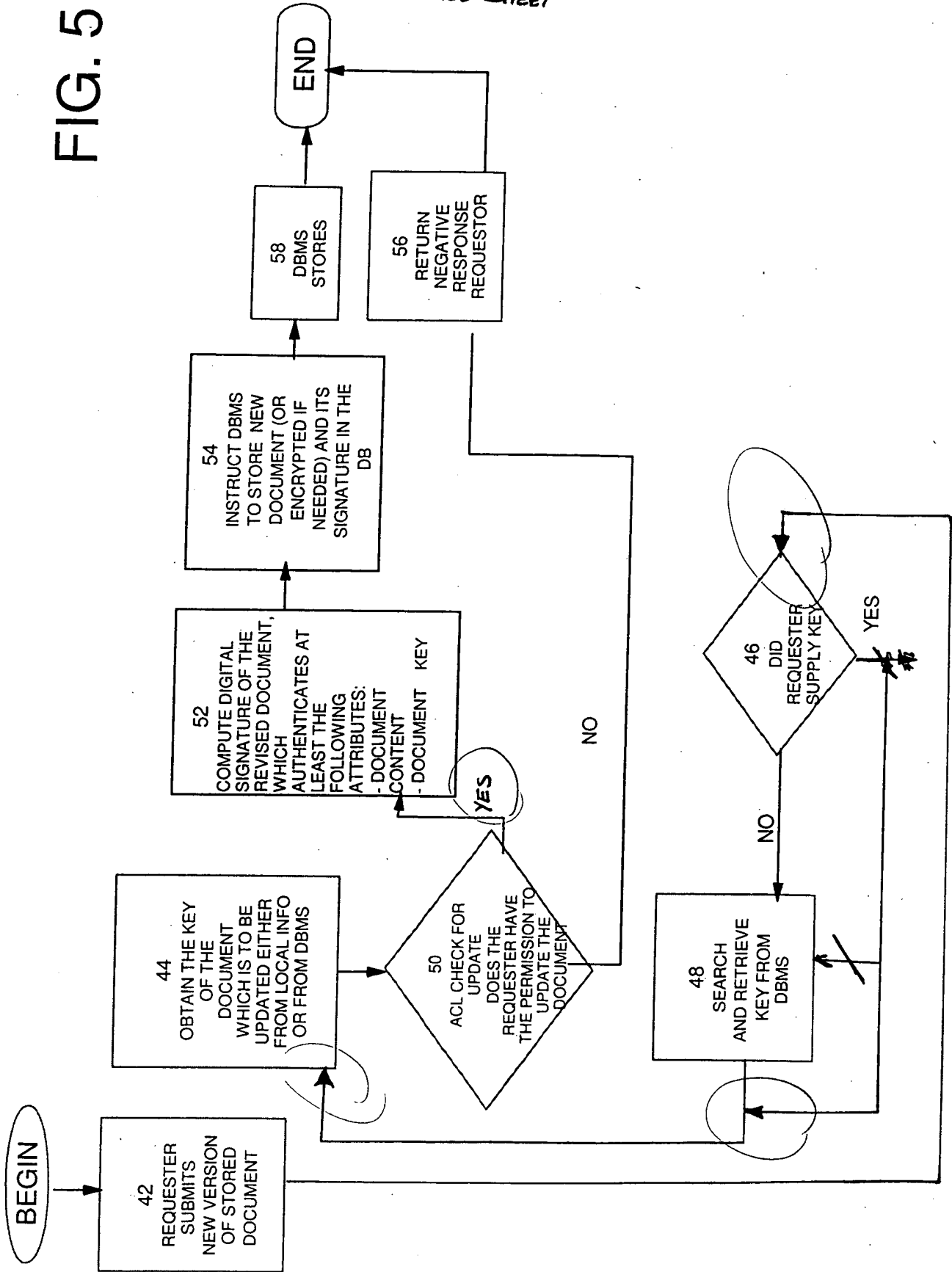


FIG. 6a

DOCUMENT RETRIEVAL FLOWCHART

BEGIN

62 REQUESTOR SUBMITS REQUEST FOR DOCUMENT RETRIEVAL ON BEHALF OF ~~PRINCIPLE~~ **PRINCIPAL**

REQUESTOR SUPPLIES OR SEARCHED DBMS

64 OBTAIN THE KEY OF THE DOCUMENT WHOSE ACL NEEDS TO BE CHECKED (SEE FIG 5)

66 RETRIEVE THE DOCUMENT'S ACL (DECRYPT DOCUMENT AND ACL'S SIGNATURE)

70 RETRIEVE THE DOCUMENT FROM DBMS PROTECTED BY THE ACL AS WELL AS THE DOCUMENT'S SIGNATURE

68 DOES THE ACL CORRESPOND TO THE ACL'S SIGNATURE?

74 DOES THE DOCUMENT CORRESPOND TO ITS SIGNATURE?

76 DOES THE DOCUMENT KEY AUTHENTICATED BY DOCUMENT'S SIGNATURE CORRESPOND TO THE KEY AUTHENTICATED BY THE ACL'S SIGNATURE?

78 PROCEED TO USE THE ACL TO DETERMINE PRINCIPAL'S ACCESS TO DOCUMENT

72 THE DATABASE INTEGRITY HAS BEEN VIOLATED, DOCUMENT OR THE ACL MAY NOT BE AUTHENTIC

79 RESPONSE

END

86

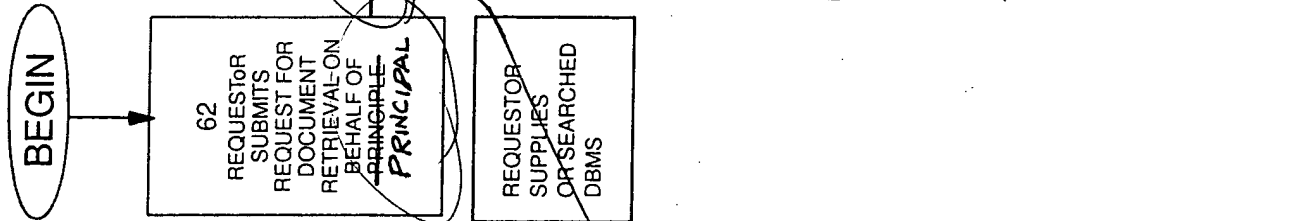
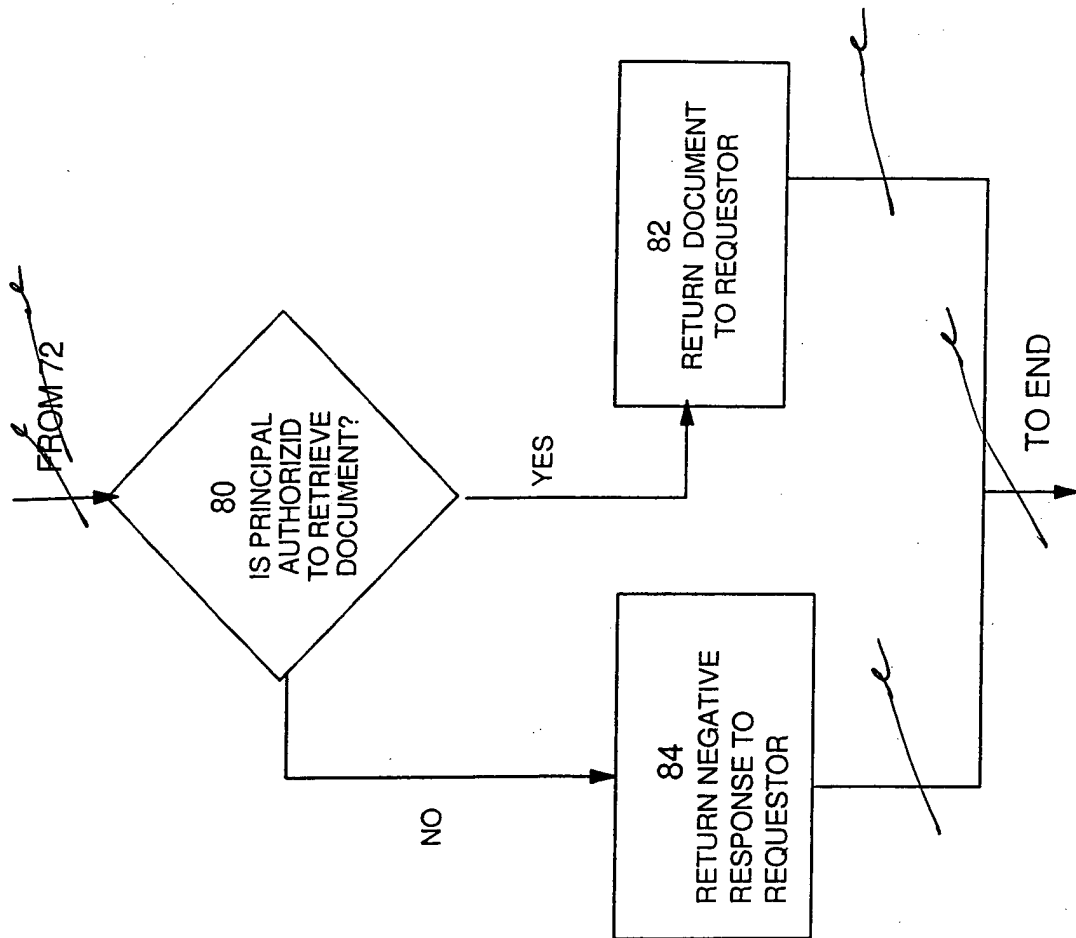


FIG. 6b (Cont'd)
DOCUMENT RETRIEVAL FLOWCHART

DETAIL OF RESPONSE



ACL UPDATE FLOWCHART

FIG. 7

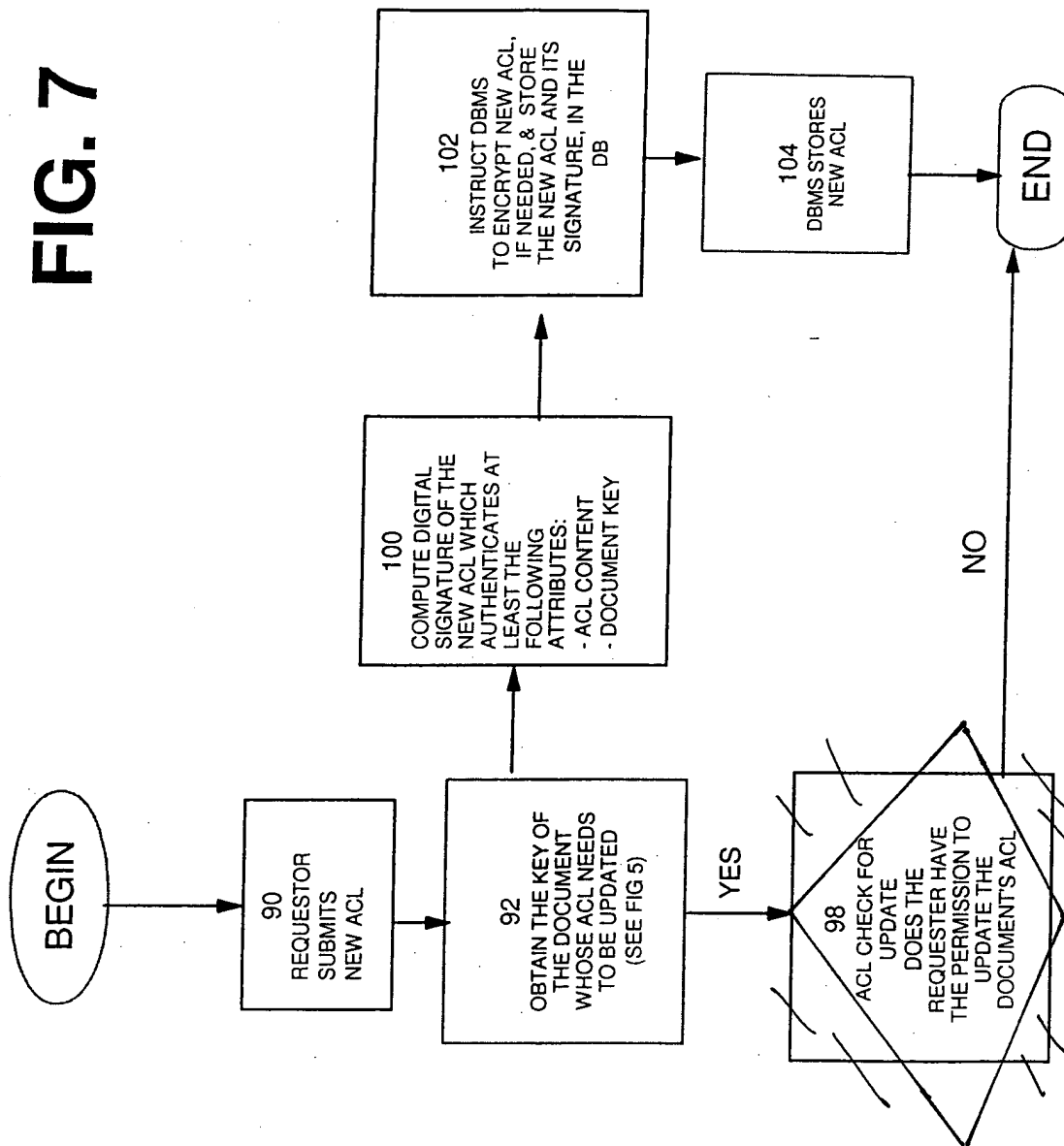


FIG. 8

ACL CHECK FLOWCHART

